Abstract

Binding assay employing labelled reagent

A binding assay process for an analyte, using a capture binding agent with binding sites specific for the analyte and a developing binding material capable of binding with the bound analyte or with the binding sites on the capture binding agent either occupied by the bound analyte or the remaining unoccupied binding sites, employs the capture binding agent in an amount such that only an insignificant fraction of the sample analyte becomes bound to the capture binding agent, which is preferably provided at high surface density on microspots. A label is used in relation to the developing binding material and is provided by microspheres which are less than 5 μm and carry a marker preferably fluorescent dye molecules. To determine the concentration of sample analyte, the signal strength, which represents the fractional occupancy of the binding sites on the capture binding agent by the analyte, is compared with a dose-response curve computed from standard samples. To detect an analyte comprising a single-stranded DNA sequence the analyte presence is detected by the existence of a signal. A kit for the process comprises the capture binding agent immobilised on a solid support, a developing reagent with the developing binding material attached to the microspheres and, for quantitative assays, standards of known amounts of concentrations of the analyte of interest.

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